

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

REUSS

Serial No.: 10/672,473

Filing Date: September 26, 2003

For: ADAPTIVE SIDETONE AND
ADAPTIVE VOICE ACTIVITY
DETECT (VAD) THRESHOLD FOR
SPEECH PROCESSING

Examiner: Jackson, Jakieda R

Group Art Unit: 2626

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
Alexandria, VA 22313-1450

Applicant requests review of the rejection mailed on July 15, 2009 in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheets (5 pages). Note:
No more than five (5) pages may be provided.

I am the:

- ☐ attorney or agent of record.
- ☒ attorney or agent acting under 37 CFR 1.34. Registration Number 44,616.
- ☒ If the required fees are missing or any additional fees are required during the pendency of the subject application, please charge such fees or credit any overpayment to Deposit Account No. 50-2315 (Order No. 01-7095).

Respectfully submitted,

Dated: October 14, 2009

By: /Thomas C. Chuang/

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REASONS FOR PRE-APPEAL BRIEF REQUEST FOR REVIEW

Box AF
Commissioner for Patents
Alexandria, VA 22313-1450

Dear Sir:

The reasons for this Pre-Appeal Brief Request for Review are set forth below.

In rejecting claims 1-2, 4-6, 9-11, 13, 15-17, 20-22, 24, and 26-32 under 35 U.S.C. 103(a), the Examiner did not establish that the claimed inventions are unpatentable over Weigand in view of Feltstrom et al. and in further view of Michaelis (PGPUB 2004/0174989).

Claims 1-2, 4-6, 9-11, 13, 15-17, 20-22, 24, and 26-32 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Weigand (USPN 6,850,617) in view of Feltstrom et al. (PGPUB 2002/0090078) and in further view of Michaelis (PGPUB 2004/0174989).

Independent claim 1 recites a voice activity detect (VAD) method that generally includes determining an average noise energy level of the communications signals based on noise energy amplitude during periods of no voice activity, converting the average noise energy level to sidetone attenuation that increases with increased noise energy level, generating a VAD threshold based at

least in part on the sidetone attenuation, and performing VAD based on the generated VAD threshold. Generating adaptive VAD thresholds based in part on the sidetone attenuation are discussed in the Specification, for example, at paragraphs [0022] and [0035].

Examiner has not established a prima facie case for the rejection of claim 1. Examiner has not pointed out with particularity where Weigand in view of Felstrom and in further view of Michaelis teaches generating a VAD threshold based at least in part on the sidetone attenuation as taught by claim 1. Furthermore, Examiner has not pointed out with particularity where Weigand in view of Felstrom and in further view of Michaelis teaches performing VAD based on the generated VAD threshold as taught by claim 1. Therefore, Examiner has not established a prima facie case for rejecting claim 1.

In the provisions relied upon by Examiner, Michaelis teaches that a sidetone amplitude is adjusted in an exaggerated manner based on whether the measured amplitude level of speech is below a threshold (32) speech level or above a threshold (34) speech level. Examiner reads the threshold (32) and threshold (34) taught by Michaelis onto the VAD threshold taught by claim 1. See Examiner Response to Arguments, Final Office Action at page 2.

However, Michaelis does not teach that threshold (32) speech level and threshold (34) speech level are *generated based on a sidetone attenuation* as taught by claim 1. Rather, Michaelis teaches that a *sidetone amplitude is generated* based on comparison of a measured amplitude of subscriber speech to threshold (32) and threshold (34).

Nowhere does Michaelis teach or suggest that threshold (32) or threshold (34) are generated or adjusted, let alone that they are generated based on the sidetone attenuation. Examiner argues that it is inherent in Michaelis that threshold (32) and threshold (34) are generated by the Michaelis system. Final Office Action at page 2, lines 18-19. Applicant respectfully disagrees. Threshold (32) and threshold (34) could be predetermined fixed values, so it is not necessary for the Michaelis system to generate them. Furthermore, even if it is inherent that threshold (32) and threshold (34) are generated, is not inherent that they are generated based on the sidetone attenuation.

Examiner also argues that generating a sidetone amplitude based on comparison of a measured amplitude of subscriber speech to threshold (32) and threshold (34) implies that threshold (32) and threshold (34) are generated based on the sidetone. Final Office Action at page 2, lines 9-11. Applicant respectfully disagrees with Examiner's logic. Generating a sidetone amplitude based on comparison of a measured amplitude of subscriber speech to threshold (32) and threshold (34) implies nothing about the manner in which threshold (32) and threshold (34) are generated.

Furthermore, Applicant respectfully submits that the threshold 32 speech level and threshold 34 speech level taught by Michaelis are not a VAD threshold as taught by claim 1. The ordinary and customary usage of the term VAD threshold, and as used in the Specification at paragraphs [0002] and [0003], is a threshold value to determine whether speech is present or not, *below which there is no speech and above which speech is present*. Threshold 32 and threshold 34 are not used to determine whether speech is present or not, but whether the speech level is below or above a certain threshold level *causing distortion*. Thus, threshold 32 and threshold 34 are not a VAD threshold.

Furthermore, Applicant respectfully submits that Weigand, Felstrom, and Michaelis, either alone or in combination, do not teach performing VAD based on the generated VAD threshold as taught by claim 1.

Weigand discloses a telephone receiver circuit with sidetone signal generation controlled by voice activity detection by using a voice activity detector (VAD) to detect the presence of voice activity and dynamically adjust the sidetone signal generation to compensate for noisy environments by eliminating or reducing the sidetone signal in the absence of voice activity. As the Examiner acknowledges, Weigand does not teach generating a VAD threshold. Office Action dated 4-9-08, page 3, lines 7-8.

Felstrom discloses a sidetone controller coupled to a side-tone amplifier, where the sidetone controller applies a set of amplifier parameters based on the detected energy of an uplink signal and a downlink signal. Felstrom does not teach generating a VAD threshold or that the value of the VAD threshold is dependent on the sidetone attenuation or generated in response to the generated sidetone attenuation.

Therefore, it is respectfully submitted that claim 1 is patentable over Weigand in view of Feltstrom and in further view of Michaelis. Accordingly, Applicant respectfully requests the withdrawal of the rejection of claim 1.

Independent claims 13 and 24 include limitations similar to those of claim 1. The same or similar arguments apply to claims 13 and 24 as those set forth above with respect to claim 1.

In view of the foregoing, Weigand in view of Feltstrom and in further view of Michaelis do not render the claimed inventions obvious under 35 U.S.C. Sec. 103(a). Withdrawal of the rejection of independent claims 1, 13 and 24 as well as claims 2, 4-6, 9-11, 15-17, 20-22, and 26-32 dependent variously therefrom, under 35 U.S.C. Sec. 103(a) is respectfully requested.

In rejecting claims 3, 7, 8, 12, 14, 18, 19, 23, 25, and 33-35 under 35 U.S.C. 103(a), the Examiner did not establish that the claimed inventions are unpatentable over Weigand in view of Feltstrom et al. and in further view of Michaelis and further in view of Hollier.

Claims 3, 7, 8, 12, 14, 18, 19, 23, 25, and 33-35 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Weigand in view of Feltstrom and in further view of Michaelis and further in view of Hollier.

However, because claims 3, 7, 8, 12, 14, 18, 19, 23, 25, and 33-35 are dependent variously from independent claims 1, 13, and 24, claims 3, 7, 8, 12, 14, 18, 19, 23, 25, and 33-35 are also believed to be allowable for at least similar reasons as those discussed above. Withdrawal of the rejection of claims 3, 7, 8, 12, 14, 18, 19, 23, 25, and 33-35 under 35 U.S.C. §103(a) is respectfully requested

CONCLUSION

Because the Examiner's rejections of claims 1-35 include legal deficiencies with regard to under 35 U.S.C. §103(a), and the MPEP, Applicants are entitled to a pre-appeal brief review of the

final rejection. Based on the foregoing arguments, Applicants request that the rejection of these claims be withdrawn and the pending claims be allowed.

Respectfully submitted,

Dated: October 14, 2009

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